

Serial No.: 10/030,378

Case No.: 20455P

### Remarks/Arguments

Claims 1, 7, 9 and 16 were amended to more particularly point out the claimed invention; and claims 18 and 19 were added. Claims 7 and 16 were amended to more clearly indicate viral activity is assayed at two or more different time intervals by performing step (a) followed by step (b) at two or more time intervals.

Claims 1 and 9 were amended to indicate measuring caspase 3 activity as an indication of virus activity, to indicate that the virus used in the assay induces caspase 3 activity, and to provide left parenthesis. Claim 9 was also amended to provide antecedent basis for "virus". Support for reference to measuring caspase 3 activity as an indication of virus activity is provided, for example, in the Summary of the Invention on page 1, lines 23-26. Support for reference to the ability of virus to induce caspase 3 activity is provided, for example, on page 4, lines 20-21.

### *Restriction Requirement*

The prior basis for restriction was withdrawn and a new basis provided. Groups I and II are now restricted based on the Group I and Group II claims differing in active method steps. The office action indicates that Group II contains method steps not required in Group I. The examiner also points out that claim 9 lacks antecedent basis for "virus".

The restriction requirement is respectfully traversed. A common technical feature present in both claims is measuring caspase 3 activity as an indication of virus activity. The fact that Group II claims also contains additional steps to Group I claims does not take away from the noted technical feature being present in both sets of claims.

It is respectfully submitted that it is improper to find a lack of Unity based on steps that are in addition to a common technical feature. Different claims will not contain all the same limitations. Merely indicating that additional steps result in a lack of Unity would result in all claims containing additional steps to lack Unity of Invention, even dependent claims.

Applicants have also amended claim 9 to provide antecedent basis for "virus". The prior action indicated that claims 9-17 should have been deemed unsearchable since claim 9 lacks antecedent basis for "virus".

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*Sequence Compliance Requirement*

An amendment was mailed March 30, 2004, responsive to the sequence compliance requirement. The sequence compliance requirement provided a one month due date, in contrast to the 3 month date set for responding to the other comments provided in the April 15, 2004 office action.

*Claim Objections*

Claims 1-3 and 6-8 were objected to because of the inconsistent use of "(a)" and "(a)"; and "(b)" and "(b)". Claim 1 was amended to provide a left parenthesis to provide a closed parenthesis for "(a)" and "(b)".

Claims 1-8 were objected to because the preamble referred to potency and stability, while step (b) indicated potency. Claim 1 was amended to refer to "activity" in the preamble and in step (b).

*35 USC § 112, Second Paragraph (Definiteness)*

Claims 1-8 were rejected as allegedly indefinite for the preamble referring to potency and stability, while step (b) indicated potency. Claim 1 was amended to refer to "activity" in the preamble and in step (b).

Claim 7 was rejected as allegedly indefinite based on reference to "two or more time intervals". Claim 7 was amended to more clearly indicate that viral activity involving both steps (a) and (b) is measured at two or more time intervals.

*35 USC § 112, First Paragraph (Enablement)*

Claims 1-8 was rejected as allegedly not enabled. The examiner argues: (a) that the specification does not enable a method for assaying viral potency and stability, (b) that the claims cover the use of viruses that inhibit caspase 3 activity, and (c) that the prior art teaches that cells undergo apoptosis in response to a wide range of environmental clues. This rejection is respectfully traversed.

As noted in the Summary of the Invention, and reflected in the amended claims, caspase 3 activity was found to provide a reliable measure of viral activity. Measuring viral activity can

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be used to measure viral potency and stability. For example, the more stable a virus in a particular environment over time, or the more stable a virus in a particular formulation compared to another formulation, the higher the viral activity. Similarly, the more potent a virus, the higher the viral activity.

(a) Assaying Viral Potency and Stability

The specification provides examples illustrating measuring caspase 3 activity to provide an indication of viral activity. (See, for example, pages 5-12.) Measuring caspase 3 activity, for example, at different times or in different formulations, gives an indication of the viral potency and stability. Potency indication is directly provided by the viral activity. A stability indication is provided by a change in potency between, for example, different times or different formulations.

(b) Use of Different Viruses

The claims were also amended to more clearly cover the use of viruses that induce caspase 3 activity. The prior office action included references indicating that some viruses inhibit caspase 3 activity.

The application provides different examples of viruses inducing caspase 3 activity and provides guidance that can be used to obtain additional viruses that induce caspase 3 activity. The application notes on page 4, lines 20-21 that "[t]he ability of a virus to infect a particular cell can readily be determined, as can the ability of the virus to induce caspase 3 activity." Examples are provided on pages 5-12 describing techniques that can be used to measure such abilities.

The data provided in the application illustrates the ability of measles, mumps and rubella viruses to induce caspase 3 activity. Such data demonstrates that induction of caspase 3 activity is not limited to a particular virus. Such data also demonstrates that techniques illustrated in the application can be used to identify other viruses inducing caspase 3 activity without undue experimentation.

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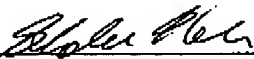
(c) Villa et al.

The prior office action cited to Villa *et al.* for indicating that apoptosis can be due to different environmental factors. Based on Villa *et al.*, the examiner argues that monitoring cell death as it relates to caspase 3 activity does not provide any indication of viral stability and potency.

As pointed out above, the application provides examples illustrating that caspase 3 activity can be measured as an indication of viral activity. Such examples demonstrate that the causes for apoptosis noted by Villa *et al.* would not prevent the skilled artisan from practicing the claimed invention.

Please charge deposit account 13-2755 for fees due in connection with this amendment. If any time extensions are needed for the timely filing of the present amendment, Applicants petition for such extensions and authorize the charging of deposit account 13-2755 for the appropriate fees.

Respectfully submitted,

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